

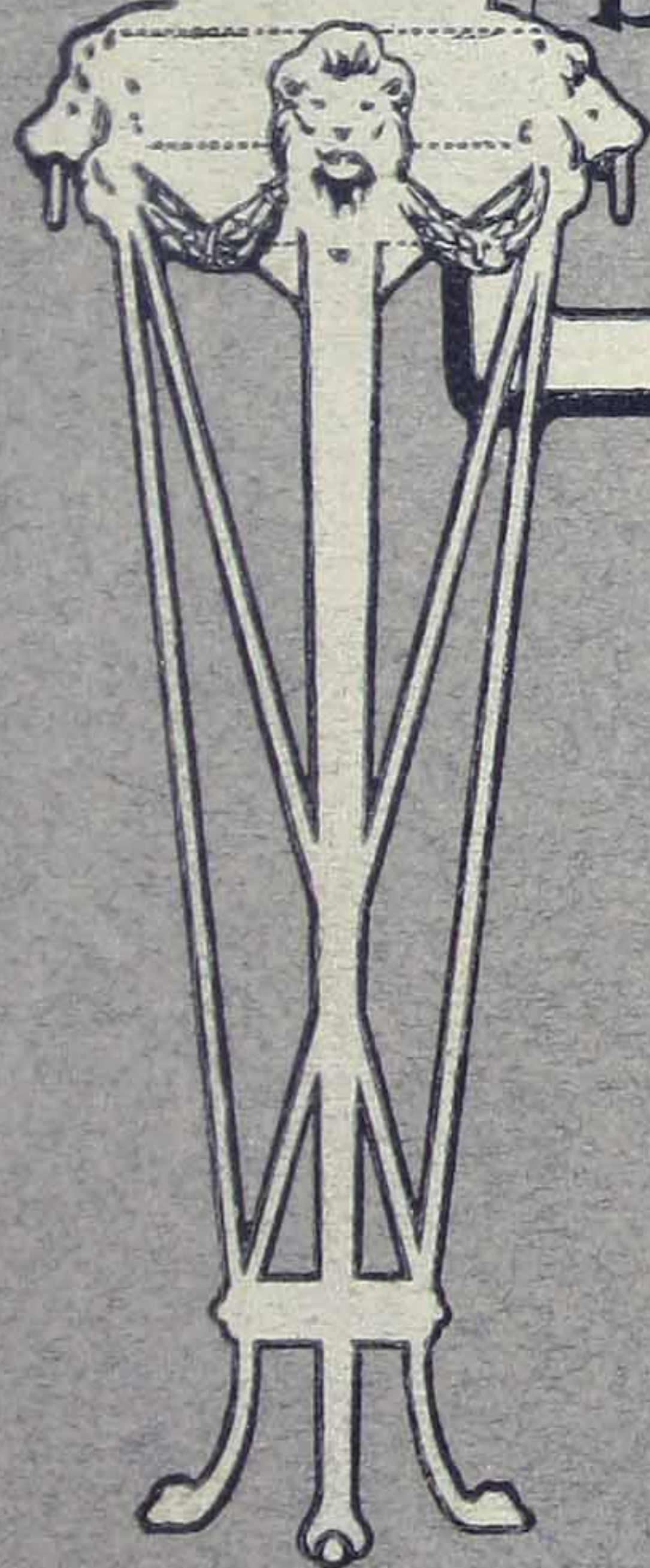
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Dec. 2, 1912

THE ANSWER
To~

Which is the
best system
of heating

?



FRANKLIN INSTITUTE

PHILADELPHIA

STANDARD 100000

AM 111A 1000

The purpose of this book
is to fairly and squarely answer
the question of what is the best
system of heating. Upon request,
we shall be glad to supply addi-
tional information on any point
applying specifically to your own
requirements : : : : :

V A P O R H E A T I N G C O M P A N Y

General Offices : 917 Arch Street

P H I L A D E L P H I A

WORKS: YORK, PA.

The Broomell Vapor System

is the outgrowth, the natural evolution, of heating by steam and by hot water ; it is the higher development—the elimination of all that is defective, and the combining and perfecting of all that is good and desirable, of both these systems.

Take, for example, the element of The Vapor System by which all heating is done—the vapor :* it is neither steam nor hot water, but just between, and better than either, as can be readily and satisfactorily demonstrated.

The Vapor System has the widest range of usefulness, being adaptable to structures of every class, from the coziest cottage to the greatest auditorium, from the most barnlike factory to the tallest skyscraper.

* "Vapor," it should be understood, as used relative to The Vapor System, means the vapor from *boiling water not under pressure*, its temperature never exceeding that of water at the boiling point—212 degrees Fahrenheit.

The Broomell Vapor System

consists of

The combined Receiver, Relief-apparatus;
Pressure-gauge and Draft-regulator.

The Quintuple Radiator Valve.

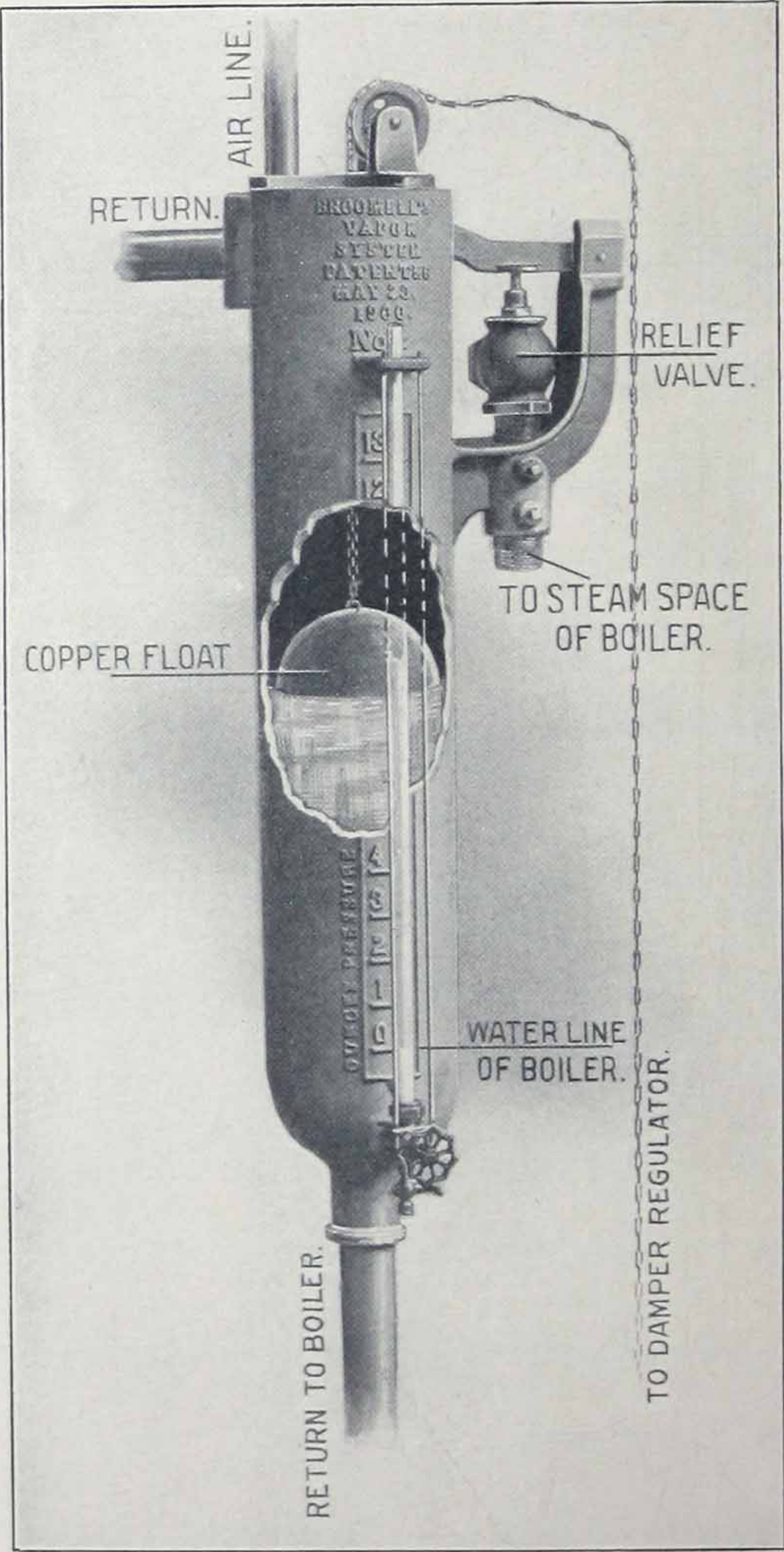
The Special Union Elbow.

Any type boiler, of standard ratings, may be used.

The Vapor System also operates satisfactorily with steam from street mains. A special Receiver is used for this purpose. And it works advantageously from high-pressure boilers with a proper reducing pressure valve or exhaust steam.

The hot-water pattern radiator, with inlet at top and outlet at bottom, is required.

The piping of The Vapor System is smaller than that required by steam and hot-water systems.



COMBINED RECEIVER, RELIEF-APPARATUS AND DRAFT-REGULATOR.

For boiler connections, see page 10

The heart of the Vapor System

is the *Receiver*. It is the regulator and governor. It does everything, except, of course, putting on fuel and shaking the grate.

It is reliable because of its simplicity—no complicated mechanism, nothing to get out of gear. It can be depended upon to close boiler-damper at any point, ranging from zero to fourteen ounces.

The details are shown in illustration. The gauge indicates ounces of pressure. A spun-copper float, inside of Receiver, connects by a brass chain to damper. The relief valve, especially designed for The Vapor System, is released only when the lever, extending into Receiver, is raised by float.

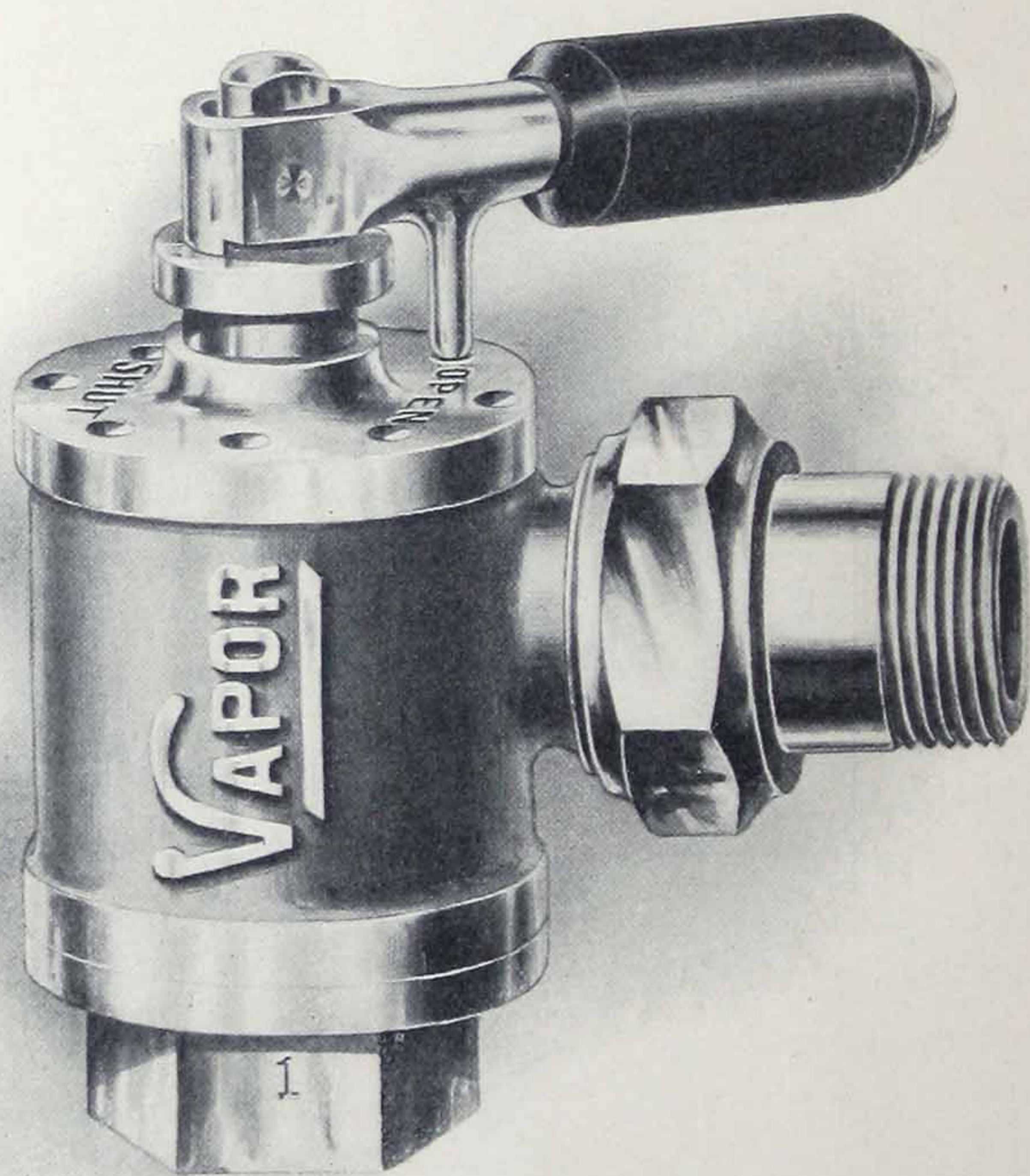
This is how the Receiver operates :

With no pressure on boiler, the water in Receiver stands on an exact level with the water in boiler ; *i. e.*, at the zero mark of Receiver.

Now, in the event of all or some of the radiator valves being closed, vapor may generate in the boiler, with the result that the pressure thus caused will depress the surface of the water in boiler and elevate the surface of the water in Receiver.

Now, assuming that float has been set to the eight-ounce mark, the water, rising in Receiver to that point, lifts the float and closes boiler-damper. If increase of pressure ceases with closing of damper, the water will remain stationary in Receiver. If, however, pressure continues to increase, after damper has been closed, the water will continue to rise in Receiver, carrying with it the float, which has already closed the damper ; the float will presently lift the lever raising the relief valve. The water immediately drops in Receiver. When it gets below the point where float was set, the damper will be opened again.

The great advantage of this Receiver is that it can be set to close the damper at any point between zero and full pressure. In moderate weather, it is sometimes desirable to close the damper on one or two ounces pressure. In colder weather, float can be set to close the damper at six or eight ounces, as may be required. Fire-door of boiler and ash-pit doors are kept closed and pressure on boiler regulated entirely by the automatic regulator. The automatic damper regulator connects to the lifting door in the ash-pit.



THE QUINTUPLE VALVE.

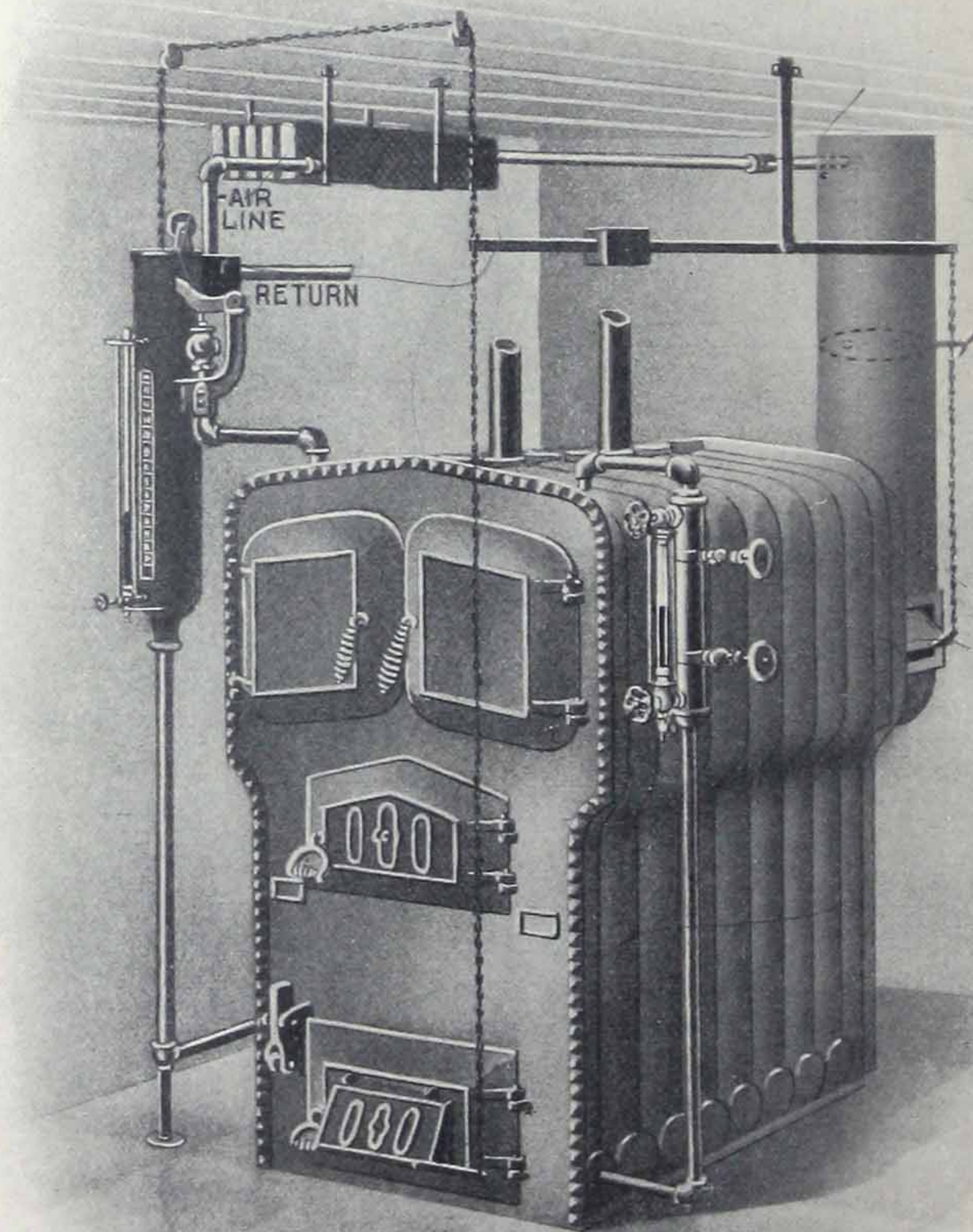
The Quintuple Valve

which exactly regulates the temperature of the radiator, is a feature that makes The Vapor System distinctively superior. It can be instantly and easily set to admit more or less vapor; to partially heat the radiator, to heat it a little more, to heat it much more, and, finally, to bring the radiator up to the maximum temperature.

This, of course, means that the Quintuple Valve differs altogether from the ordinary radiator-throttle. Experts pronounce it the most perfect valve for the purpose that can be designed. Aside from being an excellent example of mechanism, it is handsomely finished. Very heavy and substantial, the finished parts all nickel plated, highly polished. The handle finished in ebony. It is perfectly steam tight, is self packing in the valve stem and can be set with the thumb and finger. When the valve is connected up, the supply pipe is screwed into the bottom, and the nipple of the valve is screwed into the radiator.

There is heat up against the valve at all times. To deliver vapor to the radiator the handle is moved around one point, so that the indicator pin is on front hole. This brings a port on the valve-seat directly over one of the ports in the body of valve. If more vapor is wanted the handle is moved to the next point. To give the valve full opening, the handle is turned half around until it stands towards the radiator in such position that four holes in disc of valve match the four holes in body of valve.

Quintuple Valves are in five sizes, for three-fourths inch pipe: No. 1, No. 2, No. 3, No. 4, No. 5. These valves are so made as to deliver the quantity of vapor necessary to heat the radiators on which they are placed. In other words, the size of the openings in valve corresponds to the size of radiator.



RECEIVING AND CONDENSING COIL SHOWING CONNECTION TO BOILER

Connections to Boiler

are made as shown in illustration. It should be understood that The Vapor System does not require a special design of boiler. Any standard-rating boiler may be used with this Receiver; the requirements are simply a low water-line, and placing of Receiver with zero at level of water line of boiler.

The Condensing Coil

will be observed above the boiler, and connected to Receiver. It is through this condensing coil that The Vapor System is open to the atmosphere. Pressure on any radiator, or on the Receiver, is an impossibility.

From the top of the condensing coil, on opposite end from connection to Receiver, a pipe is taken down and run into the chimney. This creates suction, and a partial vacuum, through the entire system, equal to the draft of the chimney, the tendency being to exhaust the air from radiators and to pull the vapor into them as soon as the supply valves are opened.



Special Union Elbow

The return end of all radiators must be connected to the return pipes by Broomell's Improved Union Elbow. This elbow is of special design, and is so constructed that condensation is freely discharged from the radiators and the air is removed automatically. At the same time there is no possibility of radiators to heat from the return line when the supply valve is shut.

The Operation and Self-regulation

of The Vapor System can be understood from the following brief explanation, considered along with the illustrations and descriptions of Receiver, Quintuple Valve, Condensing Coil and Boiler Connections :

Assuming that the Quintuple Valves of all radiators are open, then, as soon as the water in boiler reaches the boiling point, and before any actual steam is generated, or any pressure is produced, the vapor arises through the supply pipes to the radiators.

At the same time, the air contained in the radiators is drawn out, through the return pipes, by the suction of the chimney, through Receiver and Condensing Coil.

The water of condensation, resulting from the contact of heat with the cold radiators, immediately flows, through the return pipes, into Receiver, and in turn to boiler, by gravity.

It will be observed that water cannot accumulate in the radiators or pipes.

The Operation and Self-regulation

Now, in the event of all or some of the radiator valves being closed, with the result that the pressure on top of the water in the boiler which forces water in Receiver, the Receiver being open to the atmosphere up until the height of the water in the Receiver equals the pressure on the boiler, then, as the water of condensation comes from the radiators, it will accumulate in Receiver until sufficient height to overcome the pressure on boiler is reached, when it will flow into the boiler by gravity. If, however, the pressure on boiler goes higher, the water will continue to accumulate in Receiver until the draft regulating float will be raised and damper of boiler closed and the fire checked. The most satisfactory and most accurate-working automatic draft regulator ever devised, opening or closing the damper on change of two ounces in pressure and at any point between two ounces to four ounces pressure on boiler.

Should closing the damper fail to check the increase in pressure, the rising water in Receiver will lift the lever controlling the safety valve, immediately reducing the pressure in boiler, then the water in Receiver will drop and relief valve will close.

The Operation and Self-regulation

The distance between water line of boiler and extreme high-water in Receiver in no case exceeds two feet. The maximum pressure, therefore, that can ever be on the boiler will equal a column of water two feet high, or, say, one pound per square inch.

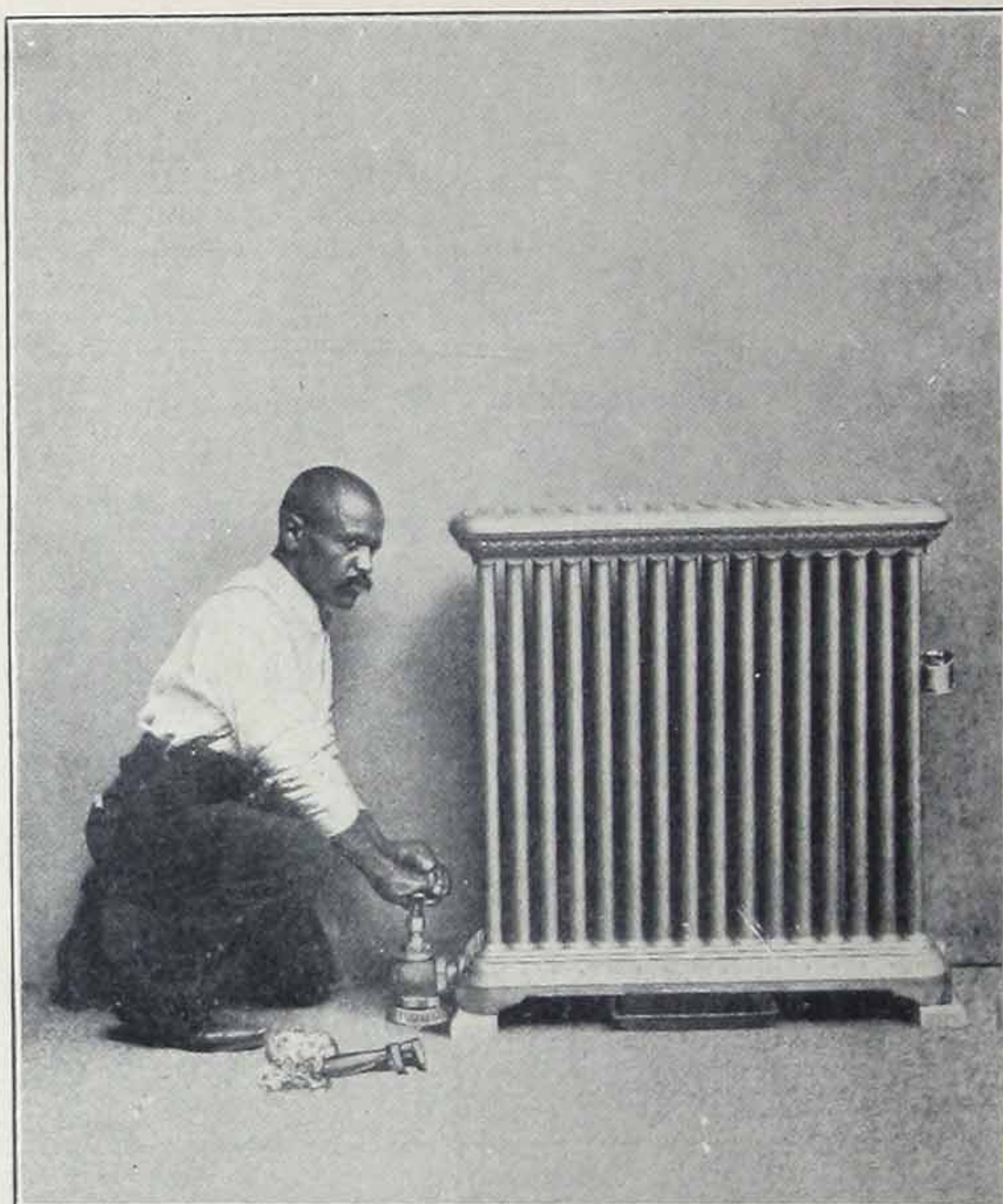
It will be seen, from the foregoing, that The Vapor System responds quickly to all demands.

Any radiator may be used independently of any, or of all, others.

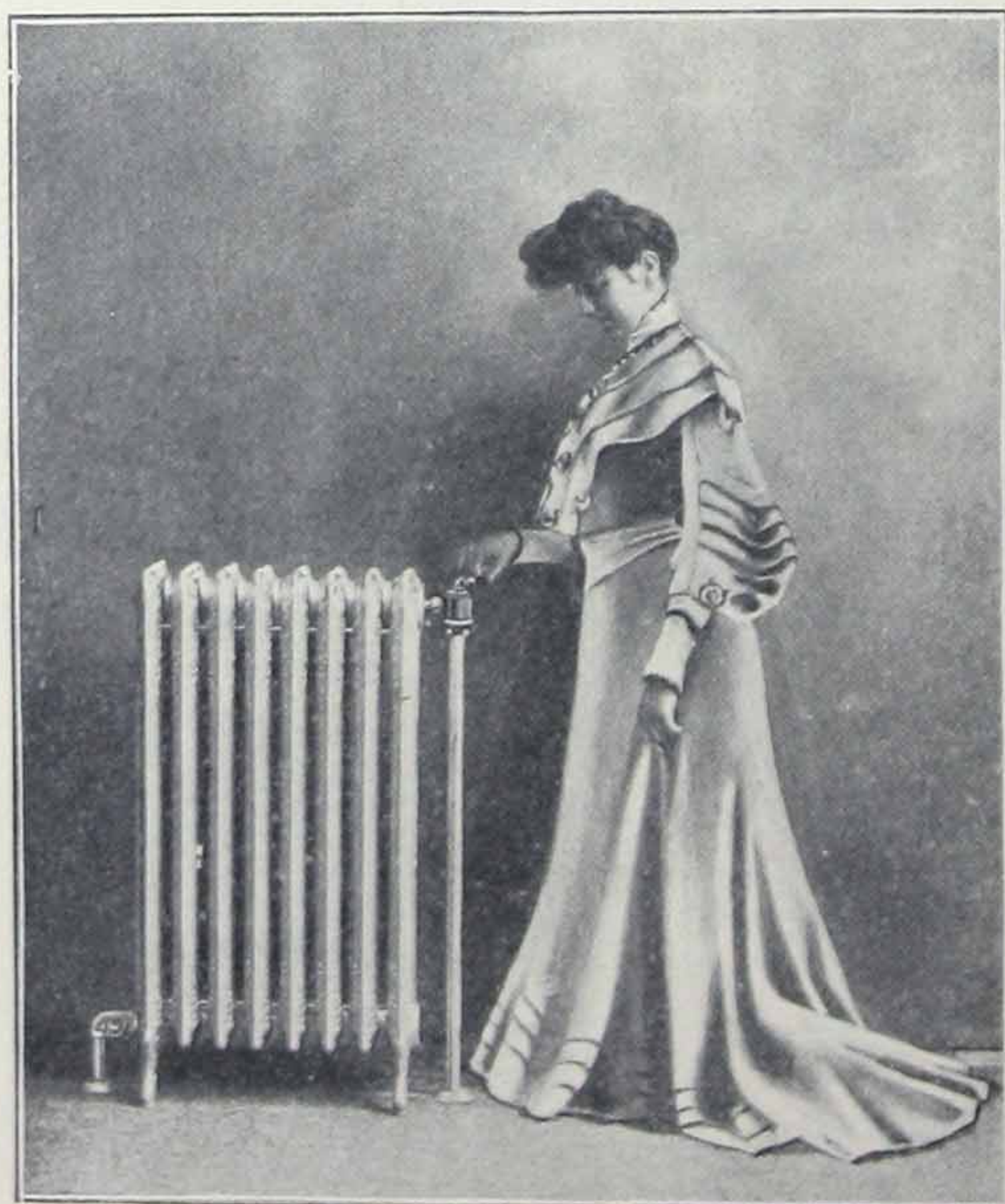
And, by means of the Quintuple Valve, as already explained, the temperature of every radiator may be regulated to meet the necessity of the moment.

With The Vapor System, heat is produced in the exact ratio that heat is consumed. There is no waste! Never too much, yet always plenty—the amount of heat is limited only by the requirements of the weather.

Further, it will be observed that The Vapor System is really very simple; that it is free from any complicated mechanism and that it is dependable because of its simplicity.



THE ORDINARY RADIATOR-THROTTLE IS DIFFICULT TO OPEN



THE VAPOR SYSTEM RADIATOR-VALVE IS EASY TO OPERATE

Points of Superiority

A more perfect understanding of the superiority of The Vapor System may be had from comparison with steam and with hot-water.

The Vapor System operates without pressure, the system being open to the atmosphere

The hot-water system, first, is required to withstand the great weight of the water with which it is filled. Without any warning and without apparent cause, a fitting will break, a radiator loop split, bonnet or valve come off, or one of many things may happen, giving no end of trouble and expense.

Then, provision must be made for expansion, the water when heated expanding upwards of $1/25$ of its volume. Accordingly, hot-water systems are erected with an expansion tank, or on the closed system with relief valve.

Both plans are open to serious objections.

An expansion tank must be located above all radiators, and often where it is difficult to prevent freezing. In cold weather care must be taken to keep up circulation of water through radiators, and air-valves must be opened frequently. Without these precautions, not only expansion tank but radiators and pipes will freeze and burst. Or, should the fire be neglected, and the water get too hot, it will boil in expansion tank, and frequently

Points of Superiority

out over the sides of the tank, flooding everything below.

If a relief valve is used, it may fail to work, as these valves often do, throwing too much pressure on the system, with a result that radiators or pipes burst, and a flood follows as a matter of course.

These accidents usually happen during the coldest weather.

The Vapor System operates without air-valves on radiators

The steam system requires every radiator to be provided with an air-valve. Automatic valves, being delicate pieces of mechanism, require adjustment and care by an expert; otherwise they cease to be automatic, and are a source of continual trouble. Not infrequently a room is flooded, and floor-coverings are ruined, by water escaping through an automatic valve. If hand air-valves are used, it is necessary to open them in the morning, or every time steam goes down in the boiler; otherwise radiators will not heat when steam is again made. Air-valves are also highly objectionable because of the noxious gases they discharge.

With a steam system, in which an air pump is employed, air-valves on radiators are dispensed with, but such a system is only feasible where a professional engineer is employed.

Points of Superiority

The Vapor System operates
noiselessly

The steam system is capable of producing the most distressing noises imaginable. Almost everyone is familiar with the nerve-jarring rattle, thump and jump of steam pipes and radiators. It is caused by contact of cold water and live steam.

The Vapor System operates
automatically ; requiring attention only to
fuel and ashes.

The steam system cannot be trusted to automatic control, but—whether double-valve, single-valve, or vacuum—requires constant watching and attention.

The hot-water system is also without satisfactory automatic control because, thus far, no damper-regulator has been devised that will automatically regulate the draft in a hot-water heater. This is a serious objection, making it necessary for some one to visit the heater several times a day, to properly set dampers and control fire.

The Vapor System admits of accurate
regulation of heat in each radiator

The steam system is universally criticized because it is either “too cold” or “too hot.” The practice when

Points of Superiority

heating by steam is to use a radiator of sufficient size to heat the room in coldest weather. It follows, necessarily, that this radiator is too large for moderate weather.

It is impossible to regulate the amount of steam delivered to radiators, working on the gravity system. If the supply valve is partially shut, in an attempt to control the temperature of the room by admitting less steam, the radiator will not work properly and in a short time will fill with water. The valves must be wide open, or entirely closed.

The hot-water system, in respect to the regulation of heat, is an improvement on steam, but not more so than The Vapor System is on hot-water. In hot-water heating, temperature changes very slowly. If the fire is bad and the water-temperature low, it will require the greater part of the day before the house can be properly heated. Then, after the house has become heated, and, to prevent over heating, the radiators are shut off, they will cool slowly because filled with hot water, often making it necessary to open windows to reduce the temperature to a liveable state.

The Vapor System accumulates no water in radiators and pipes

The hot-water system is, of course, filled with water. The dangers from the weight of the great volume of water in pipes and radiators, and of the evils of the expansion of this water, have already had comment.

Points of Superiority

The steam system constantly accumulates water in radiators and pipes. If automatic air-valves are on radiators, the water soon reaches them and escapes; carpets, furniture and ceiling are ruined. After a radiator has filled with water and a valve is opened to again heat it, the water, passing from radiator and meeting hot steam in pipes below, makes a dreadful noise.

The Vapor System is safe and dependable

no possibility of cracks in pipes, breaks in radiators, nor injury to boiler.

The hot-water system, sustaining, as it does, tremendous pressure, is liable to accident at any moment, as already pointed out.

The steam system, being also under pressure (unless operated by machinery producing a vacuum), is subject to accidents similar to the hot-water system. But the chief source of trouble is the boiler. One radiator filling with water may take out of the boiler sufficient to bring the water line below crown sheet or other exposed surface. If the boiler is cast-iron it is almost certain to crack. A steel boiler blisters and finally collapses, requiring replacing.

The attendant, noticing that the boiler has suddenly lost water, should locate the radiators containing water, but, it not always being possible to do this, to be on the safe side, he fills the boiler to the proper point. Later,

Points of Superiority

someone opens the flooded radiators, all the water returns to the boiler, perhaps filling it above steam outlet, stopping circulation of steam and causing a tremendous pounding in the piping. Or, should no one notice low water in boiler, and someone open a flooded radiator, the water will rush into the boiler, and be instantly converted into steam, over the very hot surfaces, at a high and sometimes dangerous pressure. Boiler explosions are caused in this way.

The Vapor System has quicker and freer circulation

A point covered in the comparison of heat-regulating possibilities of the three systems.

With The Vapor System heat is at the supply valve all the time. Simply open the valve and the radiator heats up at once—no water there, nor even air, that can obstruct or interfere with the vapor.

The Vapor System's radiator-valves are never troublesome

The steam system, with two valves, makes it necessary, when a radiator is shut off, to close both throttles. If either one be left open, the radiator will fill with water. The valves, being opened and closed so frequently, soon become defective and leak sufficient steam to fill the radiators with water. This continual opening and closing also wears out the packing around valve stems, making it necessary to have them repacked;

Points of Superiority

otherwise there is a continual leakage of steam into the room.

The single valve system reduces the labor somewhat, but the same annoyance remains, not the least of which is that, when opened, or closed, the services of someone with an unusually powerful hand and strong arm are required to again move the valve.

The Vapor System is more economical
than hot water or steam

produces better results with smaller fuel consumption.

This is, of course, the logical result of the combined points of superiority.

The Vapor System saves on fuel because boiler and piping are smaller ; because it operates without pressure ; because of the practically perfect automatic control of boiler ; because of the accurate regulation of heat ; because no water can accumulate in radiators and pipes ; because the circulation is quicker and freer ; and, because there is no waste.

The Vapor System is superior
in the quality of heat

It is always temperate. It does not run to extremes ; it is never violent, and never deficient. On the bitterest days, there is ample for healthful warmth ; in mild weather, there is just enough for comfort. The Vapor System responds to every change of weather conditions.

How to Order

Send us particulars as to size of building, location, number and size of rooms, with sketches, if possible, showing the different floors, and we will advise you approximately the number of radiators and the amount of radiating surface required.

After you determine to adopt The Vapor System, and so advise us, we will prepare drawings and specifications, complete in every detail.

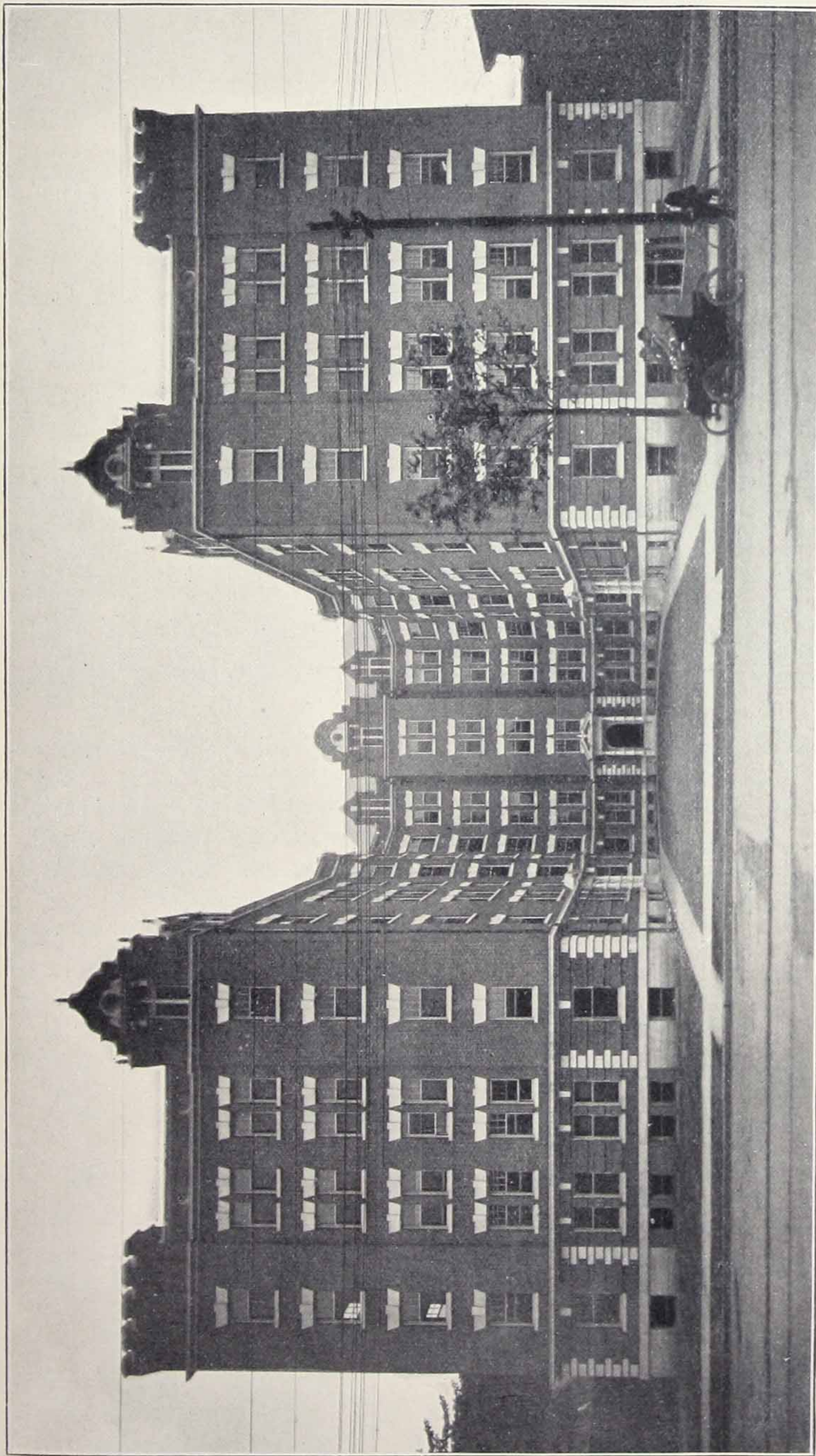
We do not do construction work, but we will gladly assist you in obtaining bids and securing the most reasonable prices.

The Broomell Vapor System and, as well, the special valves, union elbows and automatic receiver are protected by patents.

VAPOR HEATING COMPANY

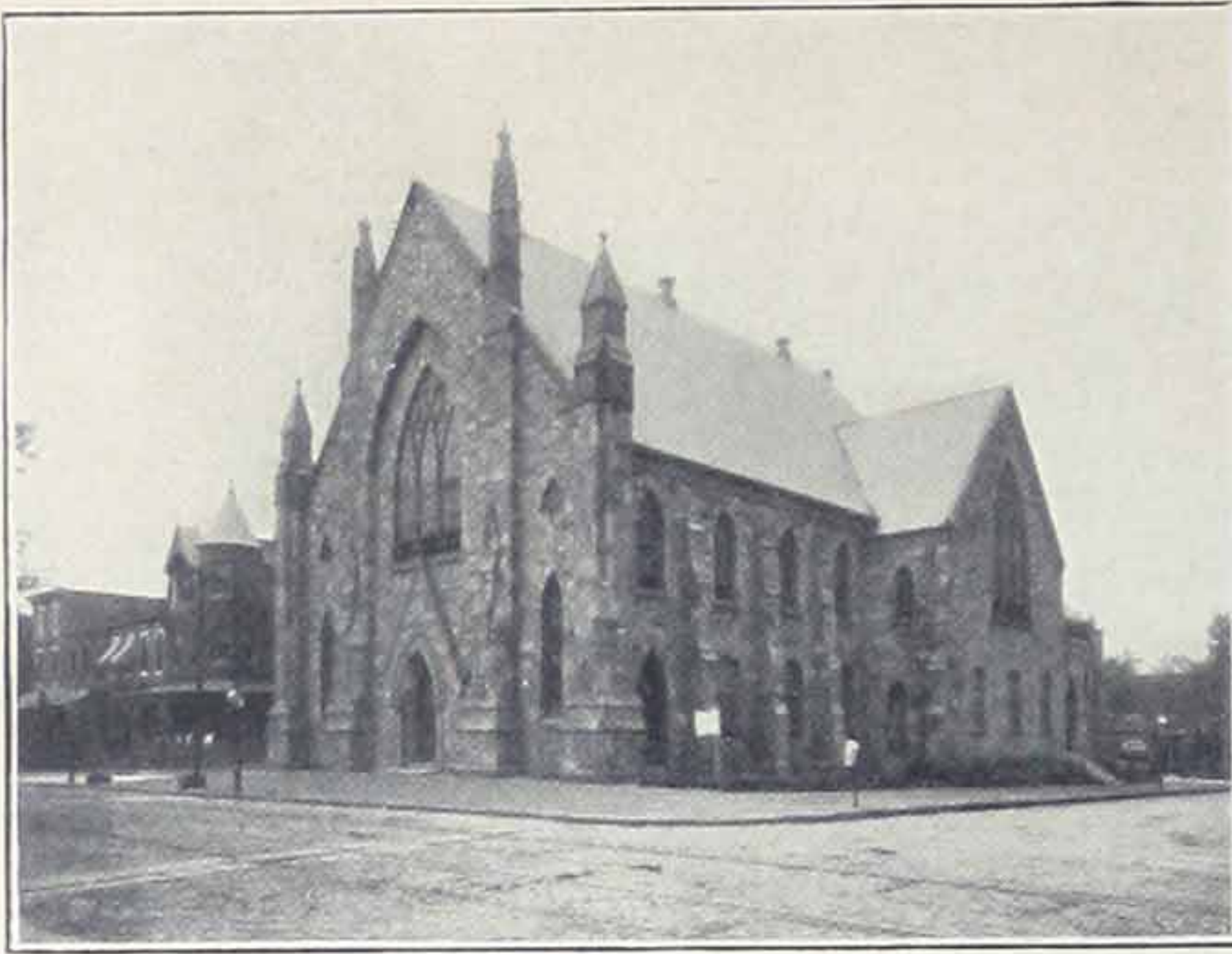
917 Arch Street

PHILADELPHIA



HIGHLAND COURT APARTMENTS, HARTFORD, CONN.
Installed by the Hartford Heating Company.

Bayley & Goodrich, Architects.



CENTENARY M. E. CHURCH.

Philadelphia, July 6, 1903.

Vapor Heating Co., Philadelphia.

Dear Sirs :—Relative to the Vapor Heating System installed in the Centenary M. E. Church. We are glad to say it has proven entirely satisfactory and no doubt also through your ability to put it properly in place, we realize fully all it was guaranteed to do. Our Church is large, *much glass*, and yet in the coldest days the Vapor

System gives us all the desired heat, and is easy to run. We cheerfully recommend it. The amount of coal consumed is *very* satisfactory.

Very truly yours,

JOSEPH A. HUDSON,

Chairman Committee

Philadelphia, Dec. 2d, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen :—We are glad to be able to add our testimonial in favor of your system of warming buildings, known as "*Broomell's Vapor System of Heating.*" We were among the first to give attention to this system and install it, installing our first plant over three years ago. We are pleased to say that we have since that time installed quite a number of plants with satisfaction to our customers and owners, and are at the present time installing two plants in private residences and shall take pleasure to recommend your system whenever we have an opportunity, and wish you the success your system merits.

Yours truly,

KRIEBEL & CO.

Heating Contractors.

West Chester, Pa., Dec. 8, 1903.

Vapor Heating Co., Philadelphia.

Gentlemen :—I am sure that nothing could be more satisfactory than your system of heating by vapor. We can have just as little heat as we may want, or just as much as we may require. More or less is so easily regulated by adjusting the radiator valve. This seems to be where you have the greatest advantage over other systems.

(Signed)

T. LAWRENCE EYRE.



RESIDENCE OF T. L. EYRE.



NATIONAL BANK, CATASAUQUA, PA.

Catasauqua, Pa., Dec. 7th, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen:—It is with pleasure that I write recommending the Vapor System of heat.

I have had experience with this system for two seasons, and find it highly satisfactory, in the consumption of fuel, ease of management, and degree of temperature maintained.

Having had experience with other heating systems, I feel the more willing to recommend the Vapor System of heating.

Respectfully yours,

OWEN F. FATZINGER,
President.

Philadelphia, Dec. 4th, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen:—Am I satisfied with The Vapor System? Yes: why shouldn't I be? It comes up to your representations; it does all you claimed it would do. And that's saying a good deal.

Write out the testimonial you want, and I will sign it. I believe in giving credit where credit is due.

Yours truly,

D. R. BURNS,
Engineer and Contractor



OFFICE BUILDING, 615 WALNUT ST.

Philadelphia, Dec. 5, 1903.

Vapor Heating Co., Philada., Pa.

Gentlemen :—Replying to your favor of 4th inst., I have no objection to your inserting cut of the building, 615 Walnut Street, in your new catalogue of your steam heating apparatus.

In answer to your inquiry, I would state that the heating plant installed in this building has proved satisfactory.

Yours truly,

CHARLES SYLVESTER,
Real Estate Broker.

Omaha, Neb., Dec. 4th, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen :—Please do not delay the valves for the Itnyer job. That man will be a friend of the Vapor system for ever, claiming his house was never so warm as this winter ; he had the valves only quarter open and at eleven o'clock last night the temperature was 80 degrees and when they looked after this morning it was still 75 ; stating also that the dampers and float respond all right ; if he only could get some pressure on the boiler he would be satisfied with the plant.

Yours truly,

GRUNWALD, SCHROEDER & CO.,
Heating Contractors.

Catasauqua, Pa., December 16, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen :—Our Mr. Schick was at Mauch Chunk yesterday, and visited the Navigation Building, and found to his great gratification that the Vapor Heating system was working in perfect condition. They carry but two to three ounces, and are using but one boiler, and the smallest one at that, using about $\frac{3}{8}$ of a ton of very poor pea coal in twenty-four hours. Many radiators throughout the entire building were shut off entirely, and others partially. It was a great satisfaction to hear the complimentary remarks of the occupants of the building. We feel sure that other work will be the result of this operation.

Respectfully yours,

SCHICK & HAUSMAN,
Heating Contractors.

NOTE.—There is 4400 square feet of heating surface in above building.

Philadelphia, Dec. 3d, 1903.

Vapor Heating Co., Philadelphia, Pa.

Dear Sirs :—Answering your favor of even date. In the fall of 1900 my attention was called to the "Broomell's Patent Vapor System" for heating residences and large buildings. I read your descriptive pamphlet and was certainly impressed by three important claims made, which were in line with what I had been after for many years, Automatic Regulation of heater drafts at ounce pressure and being a part of the apparatus, *no* air valves required, and the quintuple valve regulating the amount of vapor desired for each individual radiator at the will of the occupant of the room. To practically demonstrate your claims, which to me seemed possible, I introduced your system into my store at once. I soon found that your claims were proven and clearly demonstrated. I then placed in October, 1900, for a customer a vapor heating apparatus in his building and as expected it proved entirely satisfactory, and from that time until the present I have been placing the system with the best of results. My last erection in November, 1903, gives the following results: Temperature outside, 28 degrees 8 a. m., temperature inside the residence, 75 degrees, *no* ounce pressure. Owner and contractor more than satisfied. I am pleased to state that wherever I have given my views as to the merits of your system to customers and to many of the trade, north, south, east and west, a great many as you are aware, I have the first one to call me down for giving them bad advice, so that I can positively say with the greatest pleasure that you have a perfect system and that you substantiate all you claim for it.

Truly yours,

JOHN C. F. TRACHSEL,

Heating Contractor.

Helena, Montana, Nov. 16th, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen :—The thermometer has touched 10 degrees below and Vapor jobs are O. K., but it still gets colder, about 30 or 40 degrees below, still they will be all right I am sure.

Yours truly,

JOHN STURROCK,

Heating Contractor.

Philadelphia, Nov. 23, 1903.

The Vapor Heating Co., Phila., Pa.

Gentlemen :—Your system of heating which I have in my house is very satisfactory, and I believe is all that you claim for it, giving plenty of good, healthy heat without noise, and at a small expenditure of cost in coal, and with very little labor attached to operating.

I feel certain that your system is the best in the market to-day. I want to thank you also for the intelligent and careful attention that you gave my work.

Yours very truly,

JOHN DUNLAP, Jr.



RESIDENCE OF JOHN DUNLAP, JR.



RESIDENCE OF DANIEL BAUGH.

Philadelphia, Nov. 30, 1903.

Vapor Heating Co., Philadelphia.

Gentlemen:—The interest you have shown in the satisfactory performance of the Vapor System which you installed in my house nearly a year and a half ago has gratified my sense of appreciation.

The new work was adapted to a rather complicated two-boiler plant, where steam under unusually high pressure for house heating had proved inadequate. Your proposition to introduce vapor, with a pressure of a far less number of ounces than I had been using pounds upon the gauges, was rather startling, and I could

not help feeling skeptical on general principles. The information and experience then available to form a judgment made me doubt even against my wishes and hopes.

The results last winter, and so far the present season, have satisfied me that the Vapor System amply fulfils all you claim for it; indeed, I am convinced that in regard to uniformity of heat, prompt effect and economy of fuel, it is the best and most "common-sense" plan of dwelling house heating now in use.

Your statements of what the improvement would be, when you made a preliminary survey of my plant at my request, now seem to me rather conservative.

While the work was in progress, and since its perfect installation, your ready assistance in everything which pertained to domestic convenience, as well as in securing the best practical execution of the work, merits my highest commendation.

Very truly yours,

N. W. cor. 16th and Locust Sts.

DANIEL BAUGH.

Philadelphia, Nov. 30th, 1903.

Vapor Heating Co., Philadelphia, Pa.

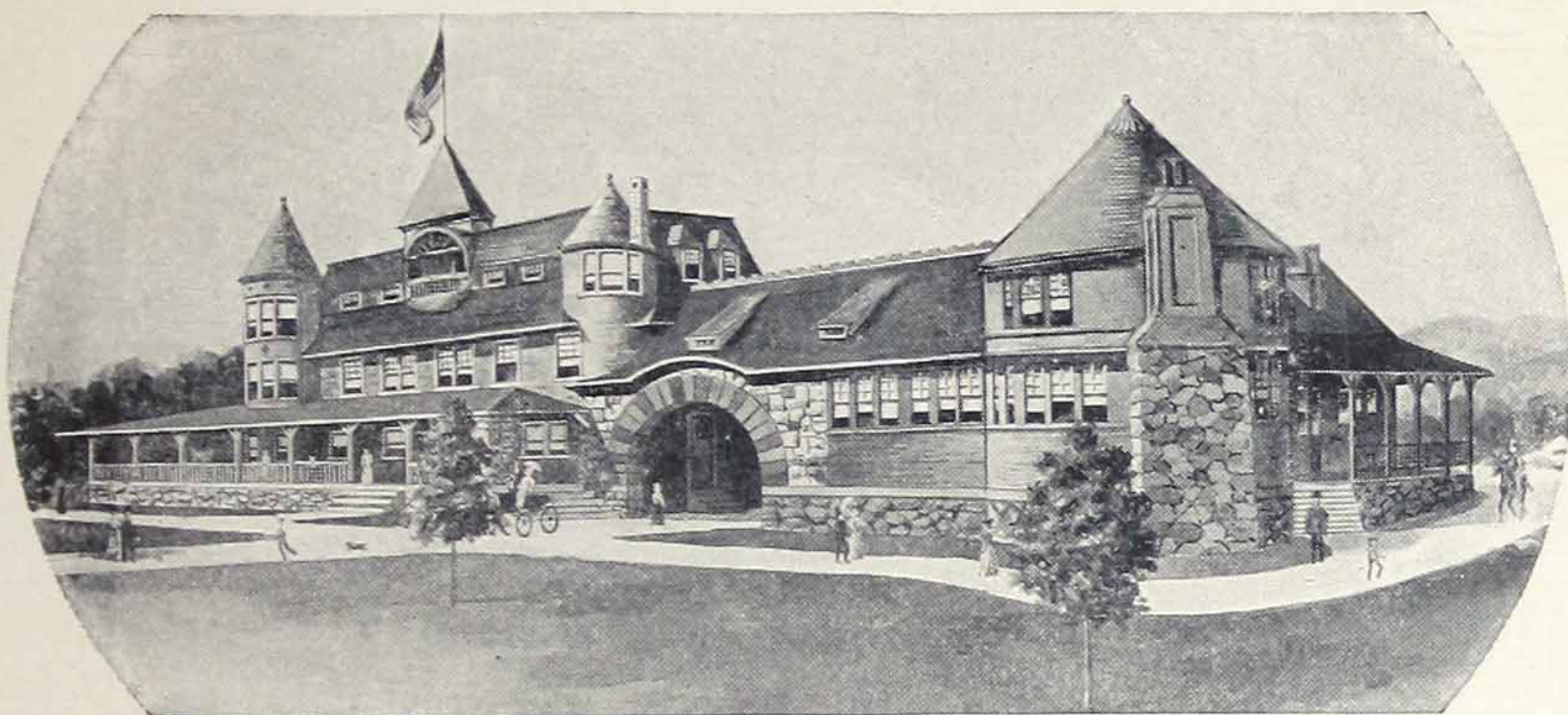
Gentlemen:—We are pleased to state to you that your system of vapor heating that we have installed has been entirely satisfactory on every contract that we have had.

When your system of heating was introduced to us about three years ago, we were inclined to be skeptical as to the results that you claimed for it. We can now say that we have had the experience with this system of heating, and we have no hesitancy in recommending it to the favorable consideration of those who have in view the installing of an economical and modern heating apparatus.

Very truly yours,

J. W. CUFF & CO.

Steam Power Contractors.



WILLS MOUNTAIN SANATORIUM.

Washington, D. C., Nov. 23d, 1903.

Vapor Heating Co., Philadelphia, Pa.

Gentlemen :—Our Company feels deeply grateful to the person who first called our attention to the Broomell's Vapor System of heating. We think we have in it, the perfect heating plant, though we must say it has not yet been tested in extremely cold weather ; on this point we feel no fear, as the smaller of our boilers is more than ample for average winter weather. We are particularly pleased with your valve as it enables us to temper the rooms of our patients to suit their whims.

Yours truly,

THE WILLS MOUNTAIN SANATORIUM CO.

Geo. Y. Worthington, *Secy.*

Broad and Erie Ave.,
Phila., Dec. 1, 1903

Vapor Heating Company, Phila.

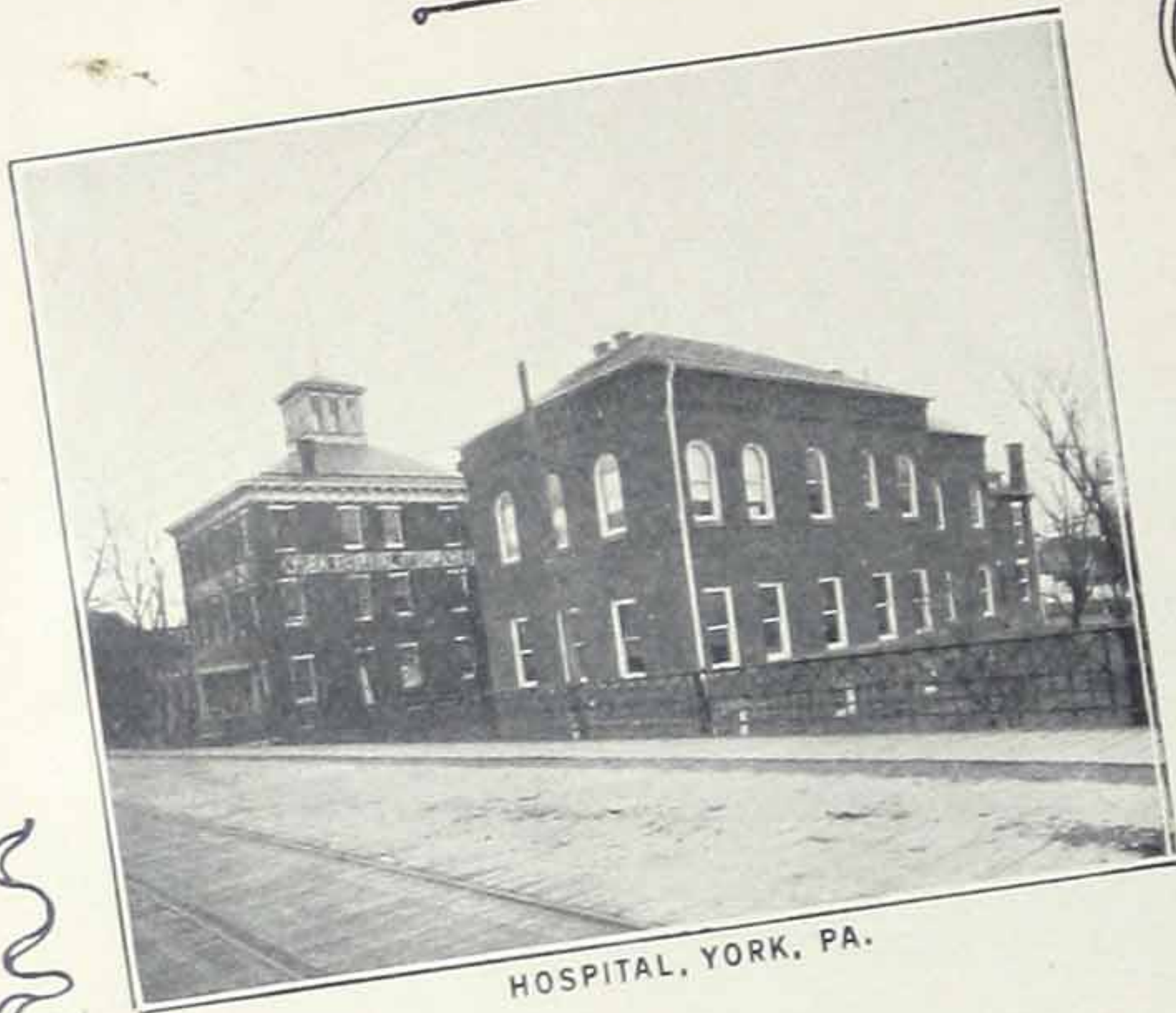
Gentlemen :—Responding to your inquiry, the thing that most impresses me is the all-sufficiency of the Vapor System. I marvel at its capacity to meet all temperature changes and keep the house evenly comfortable whether the days are mild or bitter cold ; and the wonder of it is that the system does it all itself, without having anybody fussing over it.

(Signed)

N. J. HAYES.



APARTMENT HOUSE.



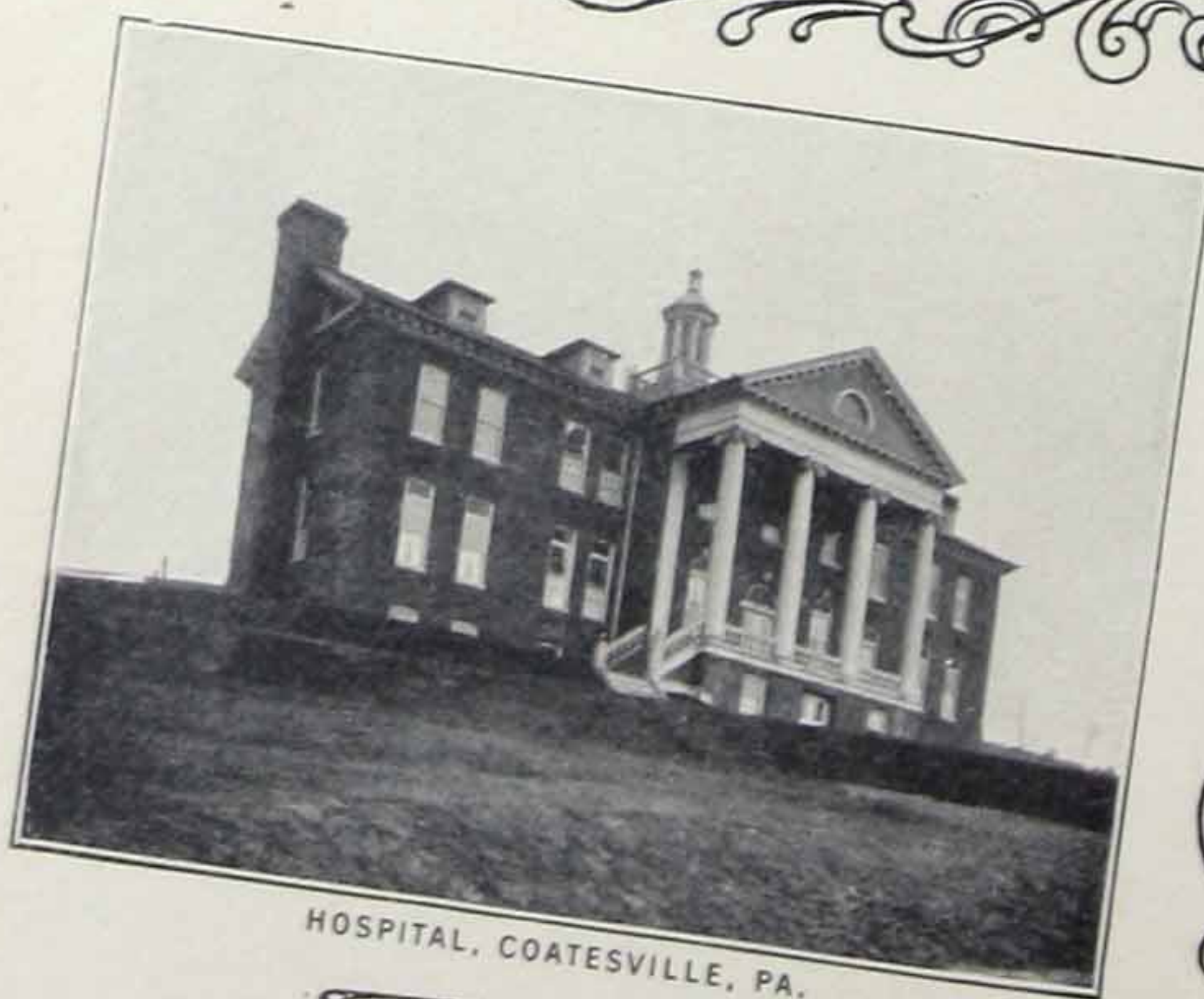
HOSPITAL, YORK, PA.



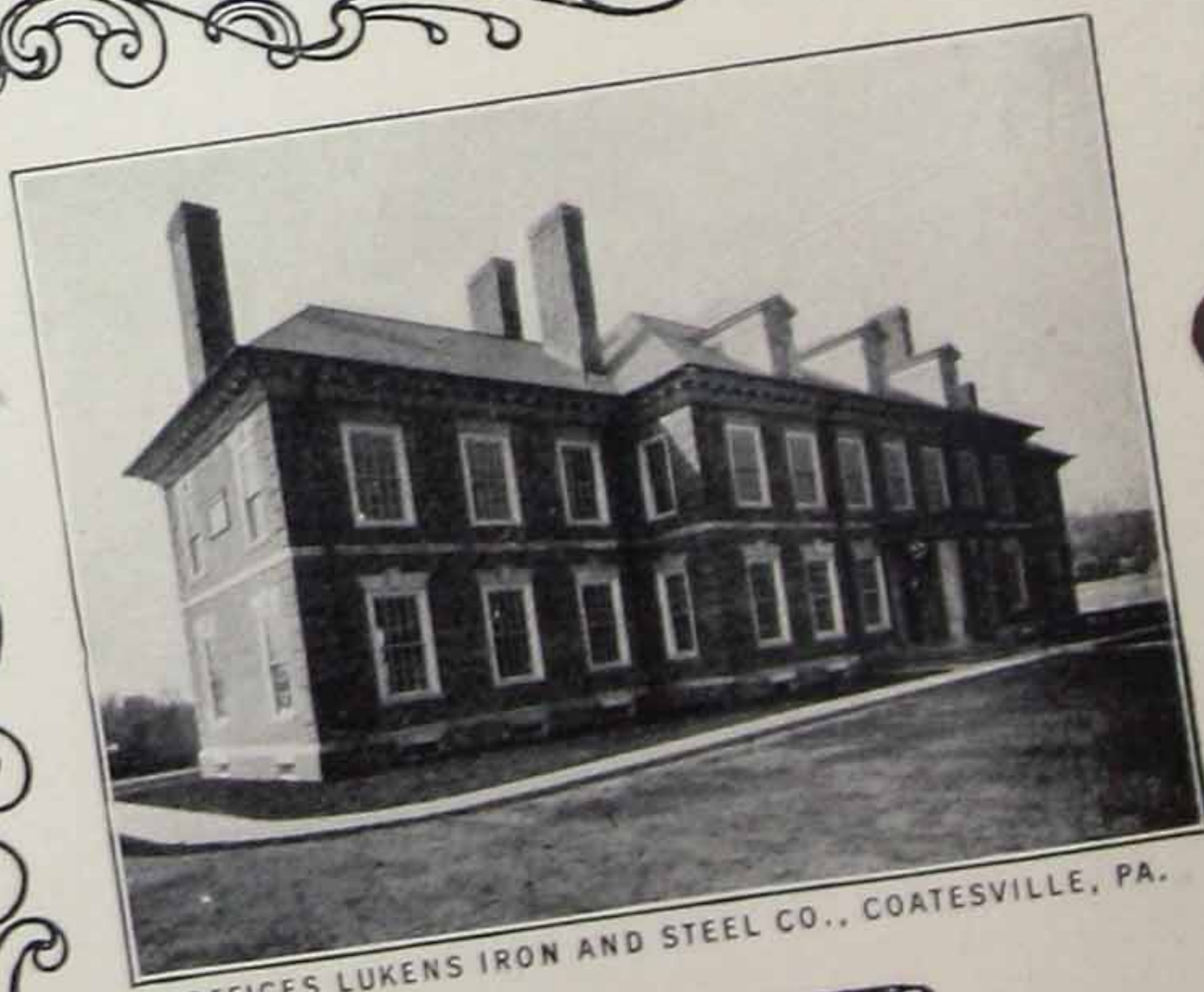
CITY HALL, BELL AIRE, O.



MARION APARTMENT HOUSE, WILMINGTON, DEL.



HOSPITAL, COATESVILLE, PA.



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